Reash, R. J., and C. A. Stewart. 1981. Preliminary investigations of longitudinal distribution and fish species diversity in Rock Run, Clark County, Ohio. Bios 52(3): 178. (abstract).

ROBIN J. REASH and CRAIG A. STEWART, Xi, Wittenberg University. Preliminary investigations of longitudinal distribution and fish species diversity in Rock Run, Clark County, Ohio.

Preliminary studies were initiated on Rock Run, a small tributary of the Mad River, beginning 23 September 1980. Fish species diversity, community similarity, and distribution were studied longitudinally and between and within riffle/pool habitats. Physical features of habitat (i.e., substrate composition, depth, and current velocity) were examined as possible factors limiting abundance and distribution. In addition, chemical and physical analyses (i.e., dissolved solids and gases) were performed at each site. Each site consisted of a riffle habitat and proximal pool habitat. Species addition was observed longitudinally, while species composition was observed to vary between and within riffle and pool habitats. Species richness within pool habitats was greater than or equal to that of adjacent riffle habitats. Species richness between and within riffle and pool habitats showed no apparent trends longitudinally. Indices of similarity calculated for paired riffle-pool habitats at each site and for riffle habitats and pool habitats alone longitudinally showed differences in species composition (i.e., community similarity). Community similarity between paired riffle-pool habitats decreased sharply downstream. The Shannon-Weiner species diversity index was calculated for each habitat and showed no trends between and within the riffle and pool habitats. Three cyprinid eurytopic species were encountered: the bluntnose minnow (*Pimephales notatus*), Northern creek chub (*Semotilus atromaculatus*), and suckermouth minnow (*Phenacobius mirabilis*). Also, two strict stenotopic species were observed: the brook stickleback (*Culaea inconstans*) and bullhead minnow (*Pimephales vigilax*). The pattern of fish distribution, in general, did not follow a normal stream profile.